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EXAMINER	
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ART UNIT	**PAPER NUMBER**
2613	

DATE MAILED: 12/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/929,531	ADAIR ET AL.	
	Examiner	Art Unit	
	Andy S. Rao	2613	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-45* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11,13-30 and 32-45* is/are rejected.

7)☒ Claim(s) *12 and 31* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 1, 3-10, 14-20, 22-29, 33-39, and 41-45 are rejected under 35 U.S.C. 102(e) as being anticipated by Upton et al., (hereinafter referred to as "Upton").

Upton discloses a wireless endoscope for wirelessly transmitting image signals(Upton: figure 2), said endoscope comprising: a tubular portion including a distal end and a proximal end and a central passageway extending therethrough (Upton: column 6, lines 45-50); a handle connected to said proximal end of said tubular portion (Upton: column 11, lines 50-55); an image sensor positioned in said tubular portion for receiving images of a surgical site, said image sensor producing an image signal (Upton: column 5, lines 60-65); circuitry means electrically coupled to said image sensor for timing and control of said image sensor (Upton: column 9, lines 20-50); video processing means electrically communicating with said image sensor for processing said image signal (Upton: column 9, lines 10-20) and converting said image signal to a post-video signal (Upton: column 10, lines 20-50); a radio transceiver element mounted in said endoscope and electrically communicating with said video processing means for wirelessly transmitting the post-video signal (Upton: column 9, lines 20-25); a power supply mounted in said endoscope for powering said endoscope (Upton: column 7, lines 1-10); and a radio transceiver module placed remote from said endoscope for receiving said post-video signal and for electrically transferring said post video signal to a video display for viewing video images produced by the video display (Upton: column 8, lines 40-50), as in claim 1.

Regarding claim 3, Upton discloses said wireless transmitting by said radio transceiver element is conducted by an IEEE standard (Upton: column 6, lines 15-30; column 8, lines 3-15), as in the claim.

Regarding claim 4, Upton discloses that said image sensor further includes a pixel array of CMOS pixels incorporated in said image sensor for receiving images thereon (Upton: column 6, lines 1-10), as in the claim.

Regarding claim 5, Upton discloses said circuitry for timing and control is placed on a plane along with said image sensor (Upton: column 9, lines 35-40- element 30), as in the claim.

Regarding claim 6, Upton discloses said circuitry is placed on a plane along with said image sensor (Upton: column 9, lines 20-25), as in the claim

Regarding claim 7, Upton discloses that circuitry means for timing and control is placed in said handle (Upton: column 9, lines 10-15), as in the claim.

Regarding claim 8, Upton discloses that said video processing means is placed adjacent said image sensor in said tubular portion (Upton: column 10, lines 13-50), as in the claim.

Regarding claim 10, Upton discloses that said video processing means is placed in said handle (Upton: column 11, lines 1-10), as in the claim.

Regarding claim 14, Upton discloses a supplementary circuit board electrically coupled to said image sensor for enhancing said pre-video prior to reception by said video processing board (Upton: column 10, lines 20-40), as in the claim.

Regarding claim 15, Upton discloses at least one light fiber positioned around a periphery of said distal end for illuminating a surgical site (Upton: column 6, lines 60-65), as in the claim.

Regarding claim 16, Upton discloses a source of light mounted in said endoscope (Upton: column 6, lines 35-40); and at least one light fiber communicating with said source of light and positioned in said tubular portion for illuminating a surgical site (Upton: column 6, lines 60-65), as in the claim.

Regarding claim 17, Upton discloses that the power source includes a rechargeable battery (Upton: column 11, lines 1-7), as in the claim.

Regarding claim 18, Upton discloses a power including a removable and rechargeable battery, and said battery for recharge with a remote charging circuit (Upton: column 11, lines 45-50), as in the claim.

Regarding claim 19, Upton discloses said power source and said radio transceiver are mounted in a common housing which is removable with respect to said endoscope (Upton: column 11, lines 25-34), as in the claim.

Upton discloses a wireless endoscope for wirelessly transmitting image signals(Upton: figure 2), said endoscope comprising: a tubular portion including a distal end and a proximal end and a central passageway extending therethrough (Upton: column 6, lines 45-50); a handle connected to said proximal end of said tubular portion (Upton: column 11, lines 50-55); an image sensor positioned in said tubular portion for receiving images of a surgical site, said image sensor producing an image signal (Upton: column 5, lines 60-65); circuitry means electrically coupled to said image sensor for timing and control of said image sensor (Upton: column 9, lines 20-50); a radio transceiver element mounted in said endoscope and electrically communicating with said video processing means for wirelessly transmitting the post-video signal (Upton: column 9, lines 20-25); a power supply mounted in said endoscope for powering said endoscope (Upton: column 7, lines 1-10); a control box placed remote from said endoscope, said control box including a radio transceiver module for receiving said pre-video signal and for electrically transferring said pre-video signal for further processing (Upton: column 6, lines 30-35); and video processing means mounted in said control box and electrically coupled to said radio transceiver module for

processing said pre-video signal and (Upton: column 9, lines 10-20) and converting said image signal to a post-video signal (Upton: column 10, lines 20-50), said video processing means for communicating with a video display for viewing video images produced by said video display (Upton: column 8, lines 40-50), as in claim 20.

Regarding claim 22, Upton discloses said wireless transmitting by said radio transceiver element is conducted by an IEEE standard (Upton: column 6, lines 15-30; column 8, lines 3-15), as in the claim.

Regarding claim 23, Upton discloses said control box communicates with said video display by a hard wired connection (Upton: column 8, lines 40-44), as in the claim.

Regarding claims 24-25, Upton discloses said control box communicates with said video display by a secondary wireless transmission means (Upton: column 8, lines 45-47), as in the claims.

Regarding claim 26, Upton discloses that said image sensor further includes a pixel array of CMOS pixels incorporated in said image sensor for receiving images thereon (Upton: column 6, lines 1-10), as in the claim.

Regarding claim 27, Upton discloses said circuitry for timing and control is placed on a plane along with said image sensor (Upton: column 9, lines 35-40- element 30), as in the claim.

Regarding claim 28, Upton discloses said circuitry is placed on a plane along with said image sensor (Upton: column 9, lines 20-25), as in the claim

Regarding claim 29, Upton discloses that circuitry means for timing and control is placed in said handle (Upton: column 9, lines 10-15), as in the claim.

Regarding claim 30, Upton discloses that said video processing means is placed adjacent said image sensor in said tubular portion (Upton: column 10, lines 13-50), as in the claim.

Regarding claim 32, Upton discloses that said video processing means is placed in said handle (Upton: column 11, lines 1-10), as in the claim.

Regarding claim 33, Upton discloses a supplementary circuit board electrically coupled to said image sensor for enhancing said pre-video prior to reception by said video processing board (Upton: column 10, lines 20-40), as in the claim.

Regarding claim 34, Upton discloses at least one light fiber positioned around a periphery of said distal end for illuminating a surgical site (Upton: column 6, lines 60-65), as in the claim.

Regarding claim 35, Upton discloses a source of light mounted in said endoscope (Upton: column 6, lines 35-40); and at least one light fiber communicating with said source of light and positioned in said tubular portion for illuminating a surgical site (Upton: column 6, lines 60-65), as in the claim.

Regarding claim 36, Upton discloses that the power source includes a rechargeable battery (Upton: column 11, lines 1-7), as in the claim.

Regarding claim 37, Upton discloses a power including a removable and rechargeable battery, and said battery for recharge with a remote charging circuit (Upton: column 11, lines 45-50), as in the claim.

Regarding claim 38, Upton discloses said power source and said radio transceiver are mounted in a common housing which is removable with respect to said endoscope (Upton: column 11, lines 25-34), as in the claim.

Upton discloses a wireless endoscope for wirelessly transmitting image signals(Upton: figure 2), said endoscope comprising: a tubular portion including a distal end and a proximal end and a central passageway extending therethrough (Upton: column 6, lines 45-50); a handle connected to said proximal end of said tubular portion (Upton: column 11, lines 50-55); an image sensor positioned in said tubular portion for receiving images of a surgical site, said image sensor producing an image signal (Upton: column 5, lines 60-65); circuitry means electrically coupled to said image sensor for timing and control of said image sensor (Upton: column 9, lines 20-50); a radio transceiver element mounted in said endoscope and electrically communicating with said image sensor for wirelessly transmitting the pre-video signal (Upton: column 9, lines 20-25); a power supply mounted in said endoscope for powering said endoscope (Upton: column 7, lines 1-10); a control box placed remote from said endoscope, said control box including a radio transceiver module for receiving said pre-video signal and for electrically transferring said pre-video signal for further processing (Upton: column 6, lines 30-35); timing and control means mounted in said control box and electrically coupled to said radio transceiver module for producing control signals to control functioning of said image sensor, said radio transceiver module wirelessly transmitting said control signals to said radio transceiver element and said radio transceiver element receiving said control signals and transferring the control signals to the image sensor (Upton: column 9, lines 34-38); and video processing means mounted in said control box and electrically coupled to said radio transceiver module for processing said pre-video signal and (Upton: column 9, lines 10-20) and converting said pre-video signal to a post-video signal (Upton: column 10, lines 20-50), said video processing means for communicating

with a video display for viewing video images produced by said video display (Upton: column 8, lines 40-50), as in claim 39.

Regarding claim 41, Upton discloses said wireless transmitting by said radio transceiver element is conducted by an IEEE standard (Upton: column 6, lines 15-30; column 8, lines 3-15), as in the claim.

Regarding claim 42, Upton discloses said control box communicates with said video display by a hard wired connection (Upton: column 8, lines 40-44), as in the claim.

Regarding claims 43-44, Upton discloses said control box communicates with said video display by a secondary wireless transmission means (Upton: column 8, lines 45-47), as in the claims.

Regarding claim 45, Upton discloses that said image sensor further includes a pixel array of CMOS pixels incorporated in said image sensor for receiving images thereon (Upton: column 6, lines 1-10), as in the claim.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 2, 21, and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Upton et al., (hereinafter referred to as "Upton") in view of Yokoi et al., (hereinafter referred to as "Yokoi").

Upton discloses a wireless endoscope for wirelessly transmitting image signals(Upton: figure 2), said endoscope comprising: a tubular portion including a distal end and a proximal end and a central passageway extending therethrough (Upton: column 6, lines 45-50); a handle connected to said proximal end of said tubular portion (Upton: column 11, lines 50-55); an image sensor positioned in said tubular portion for receiving images of a surgical site, said image sensor producing an image signal (Upton: column 5, lines 60-65); circuitry means electrically coupled to said image sensor for timing and control of said image sensor (Upton: column 9, lines 20-50); video processing means electrically communicating with said image sensor for processing said image signal (Upton: column 9, lines 10-20) and converting said image signal to a post-video signal (Upton: column 10, lines 20-50); a radio transceiver element mounted in said endoscope and electrically communicating with said video processing means for wirelessly transmitting the post-video signal (Upton: column 9, lines 20-25); a power supply mounted in said endoscope for powering said endoscope (Upton: column 7, lines 1-10); and a radio transceiver module placed remote from said endoscope for receiving said post-video signal and for electrically transferring said post video signal to a video display for viewing video images produced by the video display (Upton: column 8, lines 40-50), as in claim 2. However, Upton fails to discloses the use of a Bluetooth communications standard, as in the claim. Yokoi discloses a capsule endoscope (Yokoi: paragraph [0062]) that employs wireless communication according to a Bluetooth standard in order to communicate using a diffused signal and thus be used in conjunction with

conventional narrow band communications (Yokoi: paragraph [0072]). Accordingly, given this teaching, it would have been obvious for one of ordinary skill in the art to have the Upton endoscope use a Bluetooth communication standard as shown by Yokoi for its wireless communication interface in order to have the Upton endoscope use communicate using a diffused signal and thus be used in conjunction with conventional narrow band communications. The Upton endoscope, now communicating using a Bluetooth communication standard as shown by Yokoi has all of the features of claim 2.

Upton discloses a wireless endoscope for wirelessly transmitting image signals(Upton: figure 2), said endoscope comprising: a tubular portion including a distal end and a proximal end and a central passageway extending therethrough (Upton: column 6, lines 45-50); a handle connected to said proximal end of said tubular portion (Upton: column 11, lines 50-55); an image sensor positioned in said tubular portion for receiving images of a surgical site, said image sensor producing an image signal (Upton: column 5, lines 60-65); circuitry means electrically coupled to said image sensor for timing and control of said image sensor (Upton: column 9, lines 20-50); a radio transceiver element mounted in said endoscope and electrically communicating with said video processing means for wirelessly transmitting the post-video signal (Upton: column 9, lines 20-25); a power supply mounted in said endoscope for powering said endoscope (Upton: column 7, lines 1-10); a control box placed remote from said endoscope, said control box including a radio transceiver module for receiving said pre-video signal and for electrically transferring said pre-video signal for further processing (Upton: column 6, lines 30-35); and video processing means mounted in said control box and electrically coupled to said radio transceiver module for processing said pre-video signal and (Upton: column 9, lines 10-20) and converting said image

signal to a post-video signal (Upton: column 10, lines 20-50), said video processing means for communicating with a video display for viewing video images produced by said video display (Upton: column 8, lines 40-50), as in claim 21. However, Upton fails to discloses the use of a Bluetooth communications standard, as in the claim. Yokoi discloses a capsule endoscope (Yokoi: paragraph [0062]) that employs wireless communication according to a Bluetooth standard in order to communicate using a diffused signal and thus be used in conjunction with conventional narrow band communications (Yokoi: paragraph [0072]). Accordingly, given this teaching, it would have been obvious for one of ordinary skill in the art to have the Upton endoscope use a Bluetooth communication standard as shown by Yokoi for its wireless communication interface in order to have the Upton endoscope use communicate using a diffused signal and thus be used in conjunction with conventional narrow band communications. The Upton endoscope, now communicating using a Bluetooth communication standard as shown by Yokoi has all of the features of claim 21.

Upton discloses a wireless endoscope for wirelessly transmitting image signals(Upton: figure 2), said endoscope comprising: a tubular portion including a distal end and a proximal end and a central passageway extending therethrough (Upton: column 6, lines 45-50); a handle connected to said proximal end of said tubular portion (Upton: column 11, lines 50-55); an image sensor positioned in said tubular portion for receiving images of a surgical site, said image sensor producing an image signal (Upton: column 5, lines 60-65); circuitry means electrically coupled to said image sensor for timing and control of said image sensor (Upton: column 9, lines 20-50); a radio transceiver element mounted in said endoscope and electrically communicating with said image sensor for wirelessly transmitting the pre-video signal (Upton: column 9, lines 20-25); a

power supply mounted in said endoscope for powering said endoscope (Upton: column 7, lines 1-10); a control box placed remote from said endoscope, said control box including a radio transceiver module for receiving said pre-video signal and for electrically transferring said pre-video signal for further processing (Upton: column 6, lines 30-35); timing and control means mounted in said control box and electrically coupled to said radio transceiver module for producing control signals to control functioning of said image sensor, said radio transceiver module wirelessly transmitting said control signals to said radio transceiver element and said radio transceiver element receiving said control signals and transferring the control signals to the image sensor (Upton: column 9, lines 34-38); and video processing means mounted in said control box and electrically coupled to said radio transceiver module for processing said pre-video signal and (Upton: column 9, lines 10-20) and converting said pre-video signal to a post-video signal (Upton: column 10, lines 20-50), said video processing means for communicating with a video display for viewing video images produced by said video display (Upton: column 8, lines 40-50), as in claim 40. However, Upton fails to discloses the use of a Bluetooth communications standard, as in the claim. Yokoi discloses a capsule endoscope (Yokoi: paragraph [0062]) that employs wireless communication according to a Bluetooth standard in order to communicate using a diffused signal and thus be used in conjunction with conventional narrow band communications (Yokoi: paragraph [0072]). Accordingly, given this teaching, it would have been obvious for one of ordinary skill in the art to have the Upton endoscope use a Bluetooth communication standard as shown by Yokoi for its wireless communication interface in order to have the Upton endoscope use communicate using a diffused signal and thus be used in conjunction with conventional narrow band communications. The Upton endoscope, now

communicating using a Bluetooth communication standard as shown by Yokoi has all of the features of claim 40.

6. Claims 11, 13, 30, and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Upton et al., (hereinafter referred to as "Upton") in view of Mahant-Shetti.

Upton discloses a wireless endoscope for wirelessly transmitting image signals(Upton: figure 2), said endoscope comprising: a tubular portion including a distal end and a proximal end and a central passageway extending therethrough (Upton: column 6, lines 45-50); a handle connected to said proximal end of said tubular portion (Upton: column 11, lines 50-55); an image sensor positioned in said tubular portion for receiving images of a surgical site, said image sensor producing an image signal (Upton: column 5, lines 60-65); circuitry means electrically coupled to said image sensor for timing and control of said image sensor (Upton: column 9, lines 20-50); video processing means electrically communicating with said image sensor for processing said image signal (Upton: column 9, lines 10-20) and converting said image signal to a post-video signal (Upton: column 10, lines 20-50); a radio transceiver element mounted in said endoscope and electrically communicating with said video processing means for wirelessly transmitting the post-video signal (Upton: column 9, lines 20-25); a power supply mounted in said endoscope for powering said endoscope (Upton: column 7, lines 1-10); and a radio transceiver module placed remote from said endoscope for receiving said post-video signal and for electrically transferring said post video signal to a video display for viewing video images produced by the video display (Upton: column 8, lines 40-50), as in claim 11. However, Upton fails to disclose placing the image sensor on a first plane and the circuitry means for timing and control and the video processing means on a second plane. Mahant-Shetti discloses using a CMOS imager comprised

of having the image sensor on one chip and circuitry means for timing and control and video processing means on a second plane as a matter of design choice in order to reduce the chip profile of the image sensor and thus make that chip more compact (Mahant-Shetti: column 2, lines 60-67; column 3, lines 1-5). Accordingly, given this teaching, it would have been obvious to one of ordinary skill in the art to incorporate the Mahant-Shetti teaching of having the image sensor on one chip and circuitry means for timing and control and video processing means on a second plane for the Upton endoscope as a matter of design choice in order to reduce the chip profile of the image sensor and thus make that chip more compact. The Upton endoscope, now incorporating the Mahant-Shetti teaching of having the image sensor on one chip and circuitry means for timing and control and video processing means on a second plane, has all of the features of claim 11.

Regarding claim 13, The Upton endoscope, now incorporating the Mahant-Shetti teaching of having the image sensor on one chip and circuitry means for timing and control and video processing means on a second plane, has said second plane located in said handle (Upton: column 11, lines 50-65), as in the claim.

Upton discloses a wireless endoscope for wirelessly transmitting image signals(Upton: figure 2), said endoscope comprising: a tubular portion including a distal end and a proximal end and a central passageway extending therethrough (Upton: column 6, lines 45-50); a handle connected to said proximal end of said tubular portion (Upton: column 11, lines 50-55); an image sensor positioned in said tubular portion for receiving images of a surgical site, said image sensor producing an image signal (Upton: column 5, lines 60-65); circuitry means electrically coupled to said image sensor for timing and control of said image sensor (Upton: column 9, lines 20-50);

a radio transceiver element mounted in said endoscope and electrically communicating with said video processing means for wirelessly transmitting the post-video signal (Upton: column 9, lines 20-25); a power supply mounted in said endoscope for powering said endoscope (Upton: column 7, lines 1-10); a control box placed remote from said endoscope, said control box including a radio transceiver module for receiving said pre-video signal and for electrically transferring said pre-video signal for further processing (Upton: column 6, lines 30-35); and video processing means mounted in said control box and electrically coupled to said radio transceiver module for processing said pre-video signal and (Upton: column 9, lines 10-20) and converting said image signal to a post-video signal (Upton: column 10, lines 20-50), said video processing means for communicating with a video display for viewing video images produced by said video display (Upton: column 8, lines 40-50), as in claim 30. However, Upton fails to disclose placing the image sensor on a first plane and the circuitry means for timing and control and the video processing means on a second plane. Mahant-Shetti discloses using a CMOS imager comprised of having the image sensor on one chip and circuitry means for timing and control and video processing means on a second plane as a matter of design choice in order to reduce the chip profile of the image sensor and thus make that chip more compact (Mahant-Shetti: column 2, lines 60-67; column 3, lines 1-5). Accordingly, given this teaching, it would have been obvious to one of ordinary skill in the art to incorporate the Mahant-Shetti teaching of having the image sensor on one chip and circuitry means for timing and control and video processing means on a second plane for the Upton endoscope as a matter of design choice in order to reduce the chip profile of the image sensor and thus make that chip more compact. The Upton endoscope, now incorporating the Mahant-Shetti teaching of having the image sensor on one chip and circuitry

means for timing and control and video processing means on a second plane, has all of the features of claim 30.

Regarding claim 32, The Upton endoscope, now incorporating the Mahant-Shetti teaching of having the image sensor on one chip and circuitry means for timing and control and video processing means on a second plane, has said second plane located in said handle (Upton: column 11, lines 50-65), as in the claim.

Allowable Subject Matter

7. Claims 12 and 31 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hsieh discloses photoconductors on active pixel image sensor. Mandelkern discloses a wireless dental camera. Adler discloses an image sensor and an endoscope using the same. Miller discloses eyewear for hands-free communication.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andy S. Rao whose telephone number is (703)-305-4813. The examiner can normally be reached on Monday-Friday 8 hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris S. Kelley can be reached on (703)-305-4856. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Andy S. Rao
Primary Examiner
Art Unit 2613

asr
December 26, 2004

ANDY RAO
PRIMARY EXAMINER